

What is claimed is:

1. A method of screening genes which comprises performing *in situ* hybridization of a tissue or cell sample of an organism, using a probe which hybridizes specifically with mRNA and/or an expression sequence tag being a product of gene expression, and examining the localization of the mRNA and/or expression sequence tag in the tissue or cell.
2. The method according to claim 1, wherein the mRNA and/or the expression sequence tag being a product of gene expression, is expressing in cultured cells or tissue.
3. The method according to claim 1 or 2, wherein the mRNA and/or the expression sequence tag being a product of gene expression is confirmed with a DNA chip or DNA microarray.
4. The method according to any one of claims 1 to 3, wherein the expression level of the mRNA and/or the expression sequence tag being a product of gene expression, changes in response to an event.
5. The method according to any one of claims 1 to 4, wherein the gene and/or expression sequence tag has been cloned but function of which is unknown.
6. The method according to any one of claims 1 to 5, wherein localization of at least two types of different mRNA or expression sequence tag is examined in one type of tissue or cell in a single screening.
7. The method according to any one of claims 1 to 5, wherein localization of one type of mRNA or expression sequence tag is examined in at least two types of different tissue or cell in a single screening.
8. The method according to any one of claims 1 to 7 used for screening of a gene

encoding a substance effective as a drug.

9. The method according to any one of claims 1 to 7 used for screening of a gene related to a disease.
10. The method according to any one of claims 1 to 7 used for examining the function of a gene or expression sequence tag that has been cloned but which is of unknown function.
11. A method of monitoring gene expression which comprises collecting a tissue or cell sample from an organism each before occurrence, and after occurrence of an event, performing *in situ* hybridization in respect of each sample using a probe that specifically hybridizes with mRNA and/or an expression sequence tag being a product of gene expression, and examining changes in localization of the mRNA and/or expression sequence tag in the tissue or cell.
12. The method according to claim 11 wherein a tissue or cell sample is collected from an organism at at least 2 different points in time after occurrence of an event.